

Abstracts must be submitted **online** at www.sae.org/congress via the call for papers to only ONE session. Upon submission, you will receive an automatic reply with your paper offer number. If you do not receive a paper offer number at that point, please retry on-line submission or email mjena@sae.org. Offered papers shall not have been published outside of SAE; and if accepted, contributors will not release their paper for publication through other media.

The following information will be required during the on-line submission process:

1. A summary that states the objective of the paper/presentation;
2. Tentative title;
3. Name of the author and co-authors and all contact information;
4. Selection of the most appropriate technical session.

Paper acceptance will be based on organizer moderated peer review of a review ready manuscript.

Refer to the author resources site at <http://volunteers.sae.org/authors.htm> for other useful information in preparing your paper.

ELECTRONICS & ELECTRICAL SYSTEMS

- Testing & Instrumentation
 - Remote Communications and Data Analysis
 - New Test Methodologies and Information Management
 - On-board Instrumentation and Diagnostics
 - Component / System Simulation
 - Software/Hardware System Equipment and Innovations
 - System Software Testing & Validation
 - IVHM
 - Prognostics
- Electrical & Electronic Systems
 - Electrical Wiring Harnesses
 - Electro-mechanical Designs
 - Electronics Reliability
 - Model-Based Design and In-Vehicle Software
- Multi-Media Systems
- Software Safety Systems
- Systems Engineering
- Vehicle Sensors & Actuators
- Telematics Systems / Vehicle Navigation/ HMI
- Auxiliary Controls
- Electronic Components and Microprocessors
- Connected Vehicle
 - Smart Vehicle / Smart Infrastructure
 - Smart Grid Technologies
 - EV Infrastructure
 - Vehicle Information and Communication
 - Intelligent Transportation Systems
- Interior Electronics

ENVIRONMENT / EMISSIONS/ SUSTAINABILITY

- Emissions
 - Advanced Catalyst Technology
 - Cold Start Emissions Control Technologies
 - Diesel Exhaust Emission Control (DPF Substrates & Systems, Durability, HC-DeNOx, Modeling, New Developments, SCR)
 - Emissions Measurement & Testing
 - Emissions Processes for SI Engines
 - Particulate Emissions from Direct Injection Gasoline Engines
 - Gas Direct Injection Aftertreatment
 - Lean NOx Catalysts
 - LEV and ULEV Emissions
 - Non-Thermal Plasma Aftertreatment
 - Substrate Technology Surface Engineering & Tribology
- Thermal Systems
 - Climate Control
 - Thermal Systems Components
 - Thermal Systems for Electric & Hybrid Vehicles
 - Thermal Systems Modeling & Simulation
 - Energy Efficiency of Thermal Systems
- Sustainable Systems
 - Intelligent Highways & Guidance Systems
 - Low VOC for Interiors
 - Energy Efficient Manufacturing
 - Design for Sustainability
 - Vehicle Ownership/Usage Alternatives (shared ownership, renting, etc)
 - GHG Emissions Reduction
 - Integration of Transportation Systems into Urban Environments
 - Mass Transit and Regional Transit Systems in an Era of Mega-Cities
 - Sustainable and Energy Efficient Manufacturing
 - Advances in Alternative Energy Sources for Sustainable Development in the Transportation Sector
 - Sustainable Materials and Components
 - LCA and Sustainability
 - Vehicle Electrification Strategies for Sustainability
 - End of Life Management: Reuse/ Recycle/ Remanufacture
 - Megatrends in Sustainability
 - Reliability of Transportation System Design

MATERIALS

- Ferrous
 - Achieving Lightweight Vehicles
 - Applications for High Strength Steel Bar & Microalloyed Forgings
 - Castings
 - Coated Materials
 - Exterior Body Panels
 - Fatigue Research & Applications
 - Stainless Steel
 - Stamping Technology
- Non-Ferrous
 - Aluminum Applications
 - Magnesium
 - Vehicles Structures & Applications
 - Other Alloys
- Materials Modeling & Testing
 - Welding & Joining & Fastening
 - Modeling of Materials for Crash Applications
 - Experiments in Automotive Engineering
 - Load Simulation and Analysis in Automotive Engineering
- Polymers & Coatings
 - Bumper Systems
 - Painting Coatings
 - Components, Process & Technologies
 - Elastomers & Plastics for Fuels, Oils & Fluids
 - Instrument Panels
 - Interior Trim
 - Composites
 - Seals, Gaskets & Rubber Products
 - Seating Materials & Design
 - Low VOC Materials
 - Nanotechnology for Automotive Applications
 - Bearings, Lubricant Systems & Tribology
 - Biomaterials

INTEGRATED DESIGN AND MANUFACTURING

- Virtual Engineering E-manufacturing
- Accelerated Testing and Vehicle Reliability
- OEM Global Supply Chain
- Aftermarket Supply Chain
- Reliability & Robust Design in Automotive Engineering
 - Axiomatic Design
 - Design for Six Sigma
 - Design for Manufacturing
- Six Sigma
- Reliability Testing and DOE
- Modeling & Validation
- Accelerated Reliability & Durability Testing
- Lean Manufacturing for the Mobility Industry
- Concurrent Engineering
- Leadership for Lean Safety

PROPULSION/POWERTRAIN

- Hybrid and Non-Traditional Powertrains
 - Advanced Hybrid Vehicle Powertrains
 - Fuel Cell Power Systems
 - EV Powertrains
 - Advanced Battery Technologies
 - Natural Gas Engines and Vehicles
 - Hydrogen IC Engines
 - Power Electronics
- Fuel & Additive Effects on Combustion
 - Alternative and Advanced Fuels
 - Fuel Injection & Sprays
 - Fuel & Additive Effects on Engine Performance
- Compression Ignition Engines
 - CI Engine Modeling
 - Cold Start & Transients
 - Kinetically Controlled CI Combustion (HCCI)
 - Partially Premixed Combustion
 - Mixing Controlled (Diesel) Combustion
 - In-Cylinder Diesel Particulate & NOx Control
 - New Diesel Engines & Components
 - Lubricant Diagnosis and Management Systems
- Spark Ignition Engines
 - SI Engine Modeling
 - Direct Injection SI Engine Technology
 - New SI Engine & Component Design
 - Two-Stroke Engines
 - Rotary Engines
 - SI Combustion
- High Efficiency and Reduced CO₂/km
 - Waste Heat Recovery
 - Engine Downsizing and Downspeeding
 - Variable Valvetrain Technologies
 - Small High-Efficiency Engines
- Control and Optimization
 - Powertrain Control and Optimization
 - Powertrain Actuators and Sensors
 - Combustion Control and Optimization
- Engine Components and Subsystems
 - Advanced Turbochargers & Power Boost
 - Engine Breathing Systems
 - Power Cylinder Systems
 - Variable Valve Actuation Systems
 - Electronic Engine Controls
 - On Board Diagnostics
- Lubricants
 - Engine Oils
 - Heavy Duty Diesel Lubricants
 - Transmission and Axle Lubricants
 - Lubricant R&D to Improve Vehicle Performance
- Transmissions & Drivelines
 - Clutch Systems & Controls
 - Gear Systems & Driveline
 - Launch Devices
 - New Transmission Systems
 - Hybrid Transmissions
 - CVT/IVT
 - Transmission & Driveline NVH
- Engine Flows and Combustion Diagnostics
- In-Cylinder Velocity Measurements
- Heat Transfer and Advances in Thermal & Fluid Sciences
- Multi-Dimensional Modeling
- Vehicle & Engine Systems Analysis & Modeling

SAFETY / TESTING

- Connected Vehicle
 - V2V/V2I Safety Applications
- Activity Safety
 - Lane Departure Warning/Lane Keeping Assistance
 - Collision & Blindspot Warning
 - Active Pedestrian Protection
 - Backover Protection
 - Collision Imminent Braking
 - Collision Avoidance
- Occupant Protection
 - Air Bag/Suppression
 - Belt Restraints
 - Child Passenger Restraints
 - Biomechanics
 - Pedestrian Safety
 - Integrated Safety Systems
 - CAE Methods in Crash Safety Applications
 - Occupant Safety
 - Rollover
 - Rear & Side Impact
 - Accident Reconstruction
 - Event Data Recorders
 - Computer Applications for Crashworthiness
 - Vehicle Aggressivity & Compatibility in Crashes
 - Safety Test Methodology
 - Safety Critical Systems
 - Collision Avoidance
 - Pre-crash sensing
- Fire Safety
 - Fire Statistics & Analysis
 - Material Flammability & Fire Experiments
 - Underhood and Electrical Fires
 - Hydrogen Vehicle Fire Safety
 - Suppression Systems
- CAD/CAM/CAE
 - Design Simulation & Design Tools
 - Digital Modeling
 - Rapid Prototyping
 - Virtual Development
- Body Design & Engineering
- Design Optimization: Methods & Applications
- Body Structures
- Corrosion Prevention
- Digital Human Modeling
- Glass Applications
- Human Factors
 - Seating
 - Vision and Visibility
 - Comfort
 - Mobility
 - Telematics
- Lighting Technology
- Aerodynamics
- Wiper Systems
- Steering, Chassis & Suspension
 - Steering/Suspension Components & Systems
- Tires & Wheels
 - Component design/test technologies
 - Simulation/modeling
 - Testing and performance evaluation
- Vehicle Dynamics and Simulation
 - Passive/active
 - Stability control systems
 - Simulation and modeling
- Motorsports
 - Safety
 - Vehicle/Chassis
 - Tires
 - Testing/Simulation
 - Aerodynamics
 - Powertrain
 - Fuels & Lubricants
 - Materials
 - Green Motorsports
 - Alternative Energy Systems & Sources

NEW DEADLINE

Deadline for submitting paper offers..... September 1, 2012
 Review Ready Manuscripts due to session organizers..... October 23, 2012
 Final Manuscripts due to SAE..... January 25, 2013

Abstracts will be confirmed after September 1.